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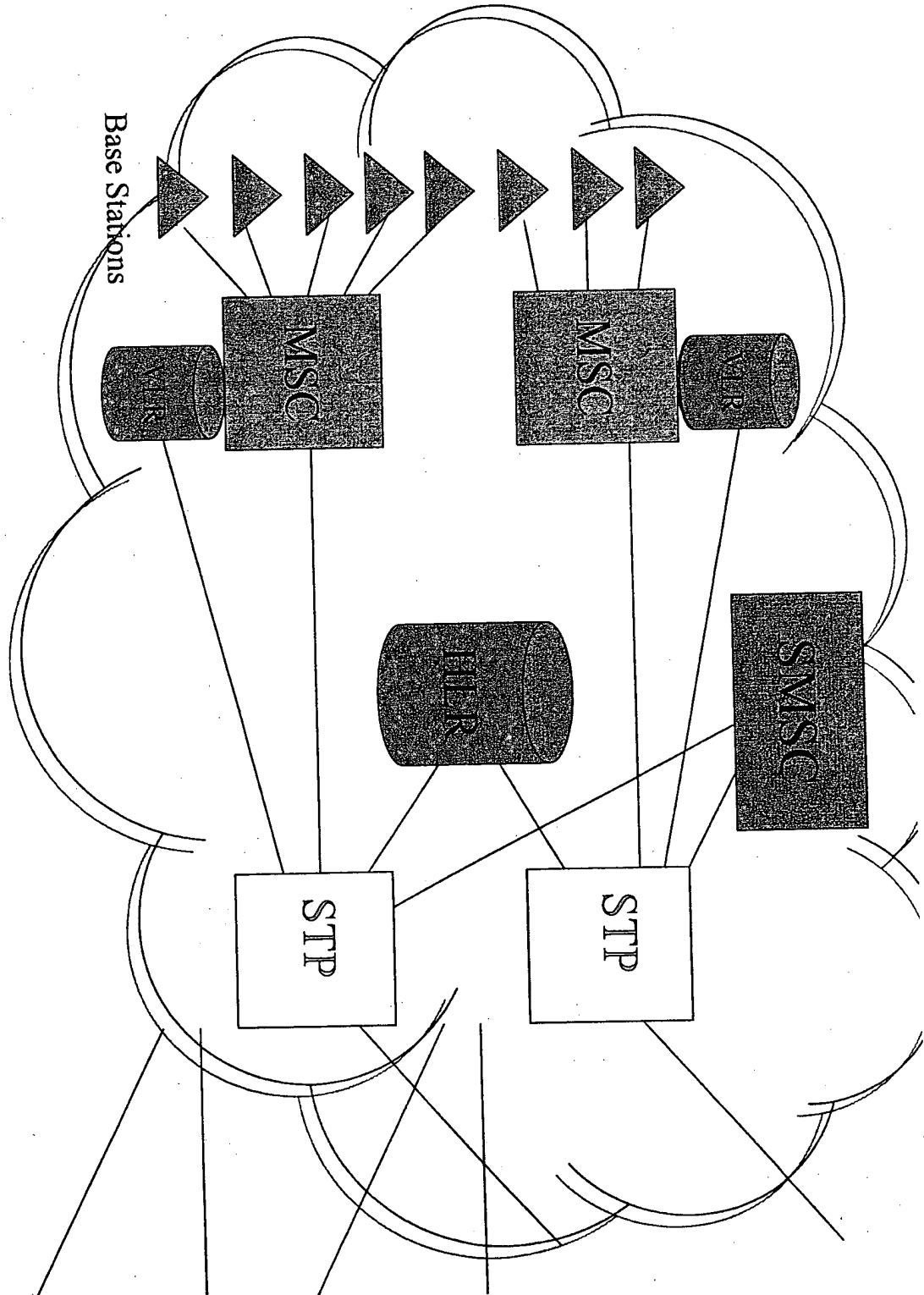


Figure 1. GSM Operator Network Typical Nodes

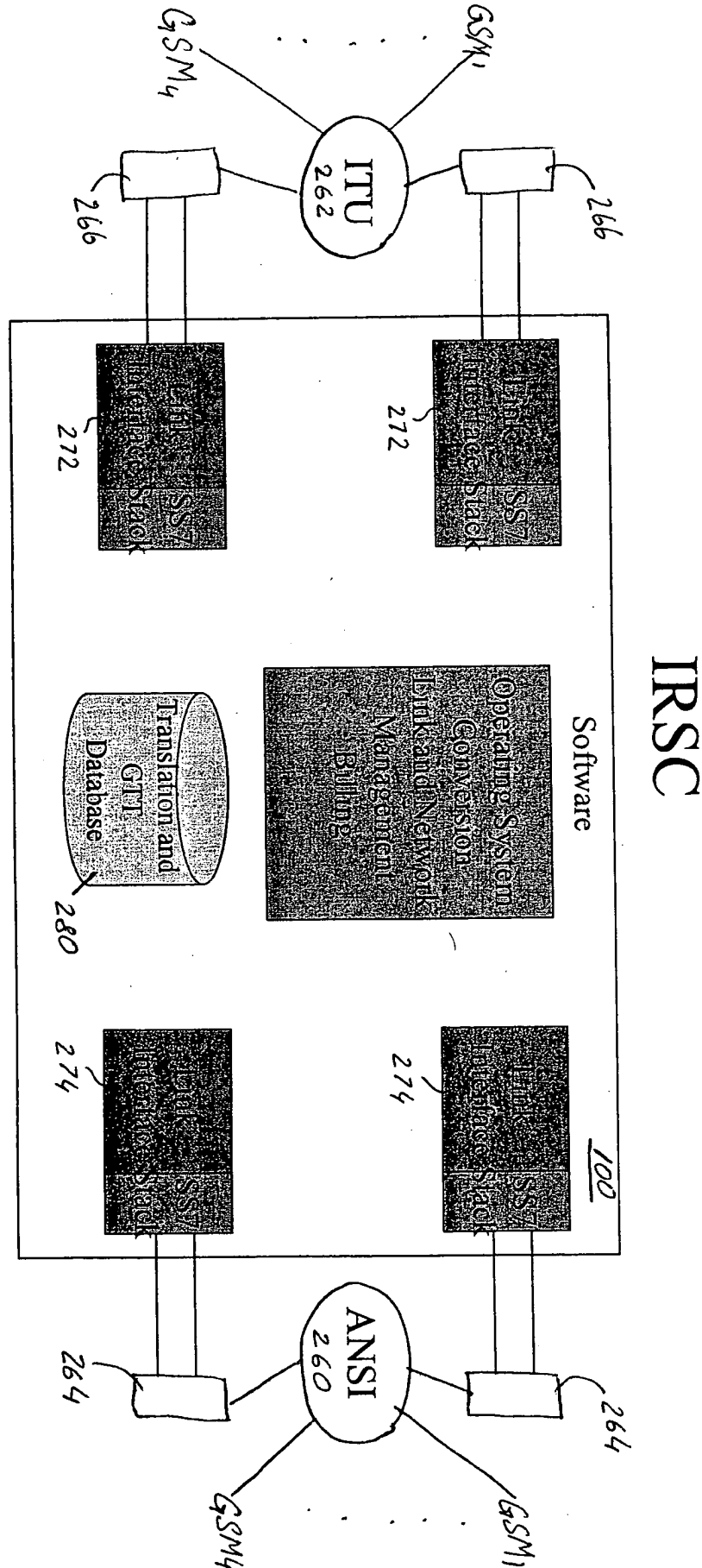


Figure 2. IRSC Components: Hardware, Firmware, and Software

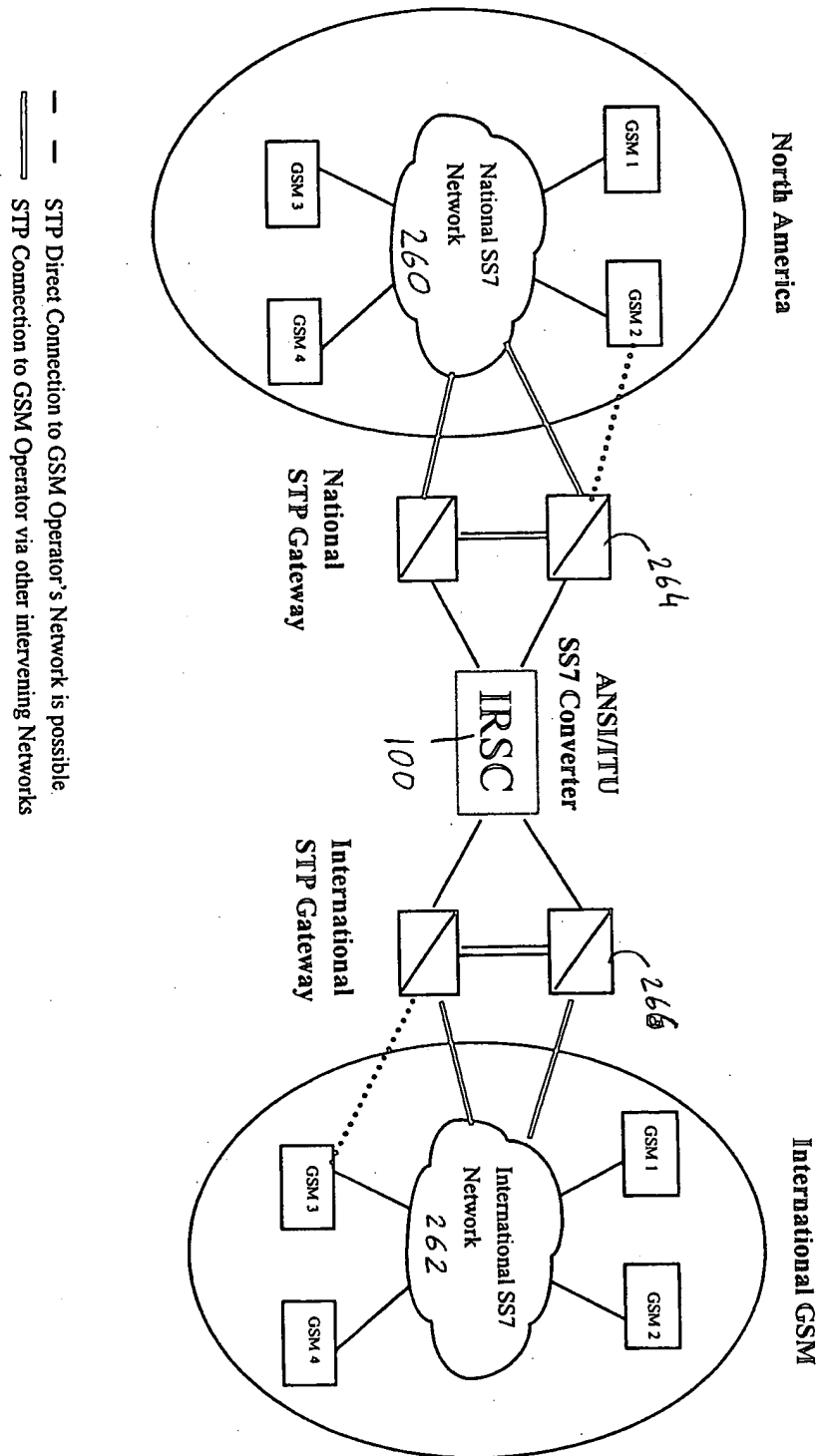


Figure 3. IRSC Preferred Network Configuration

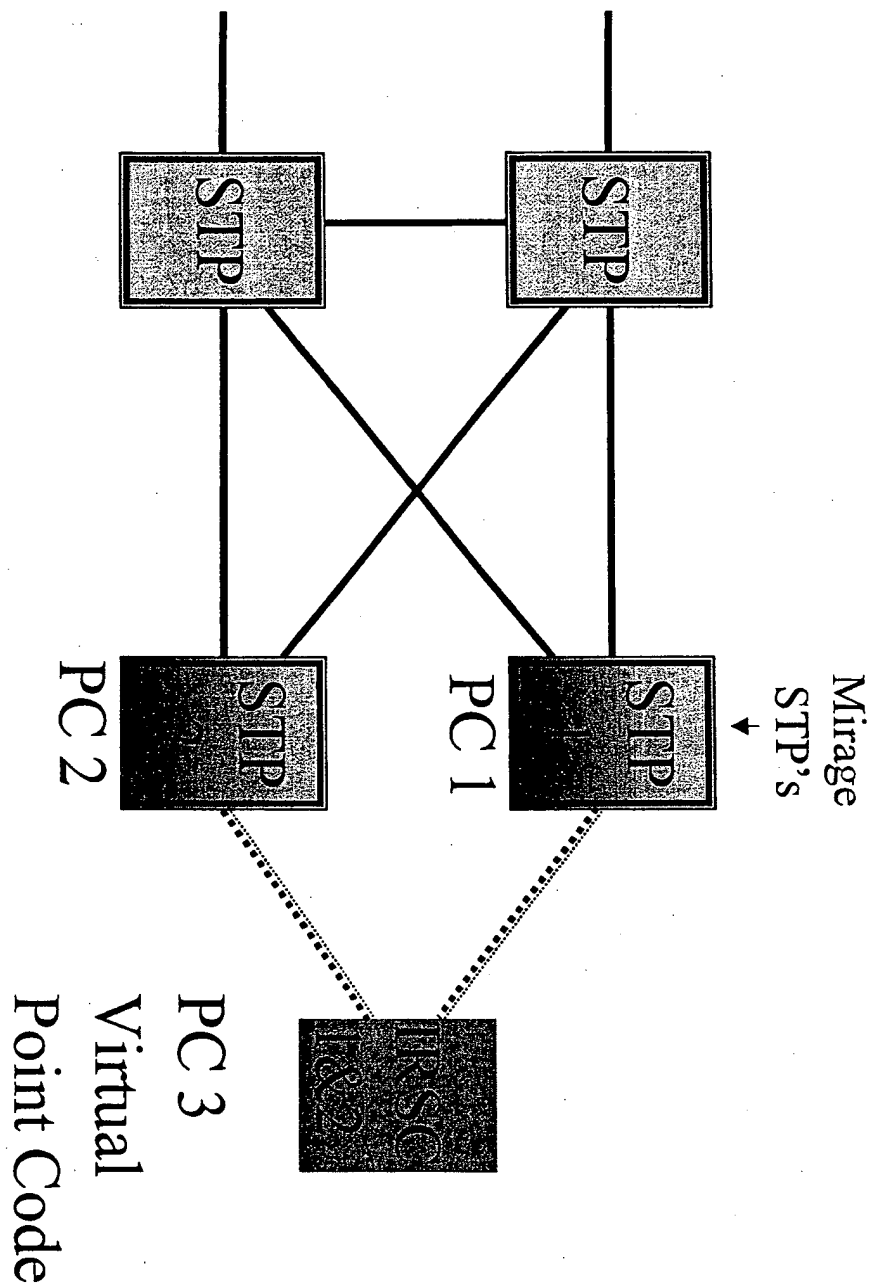


Figure 4a. Virtual Point Code Concept

ISPC International Signalling Point Code
 NSPC National Signalling Point Code
 Virtual Point Code Used by Operators to address IRSC

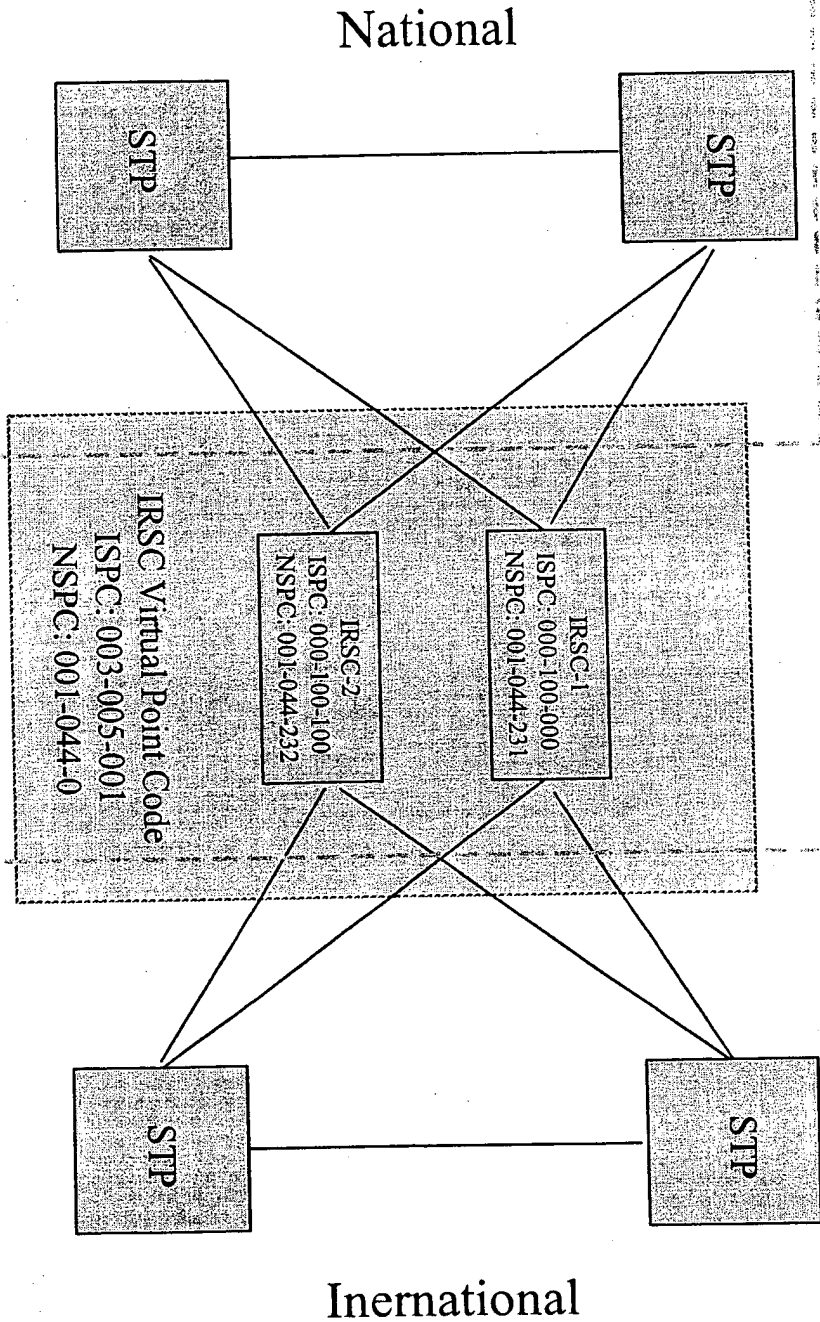


Figure 4. b Virtual Point Code Configuration

E.212 Number Format

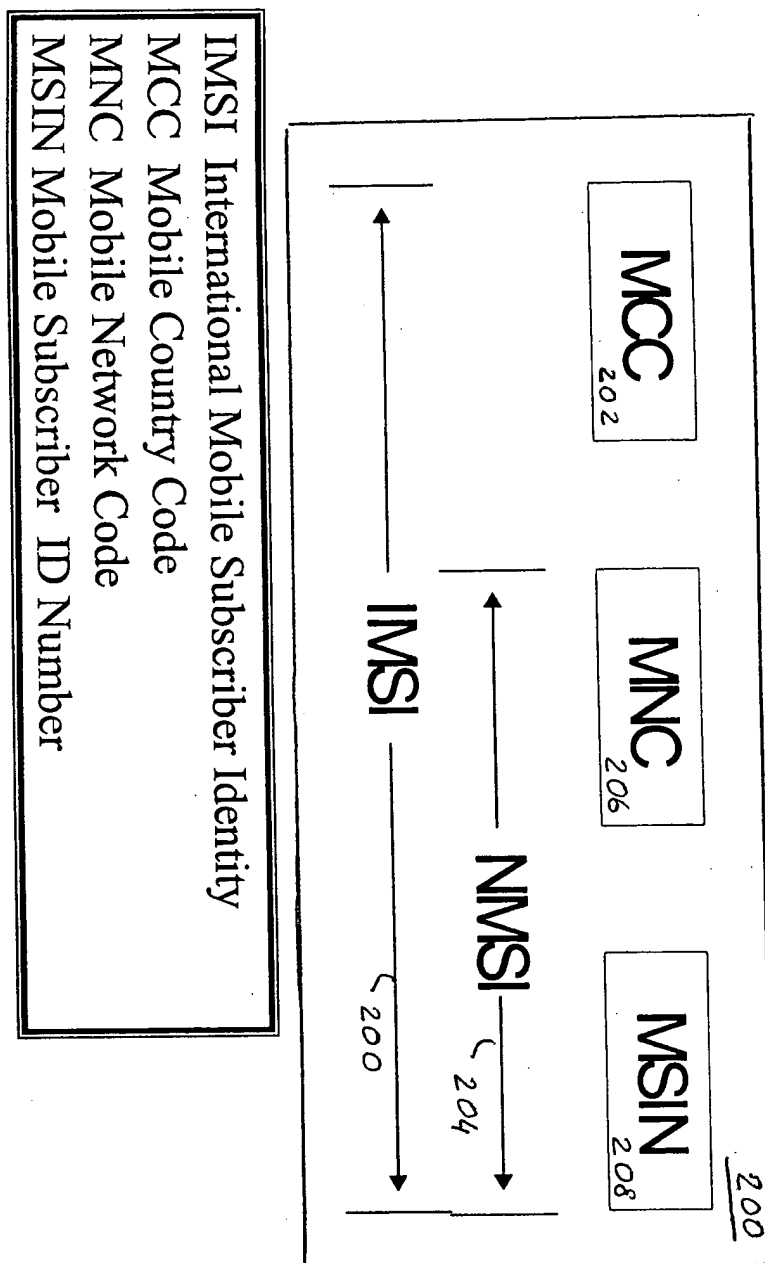


Fig 5a IMSI

E.214 Mobile Global Title Number Format

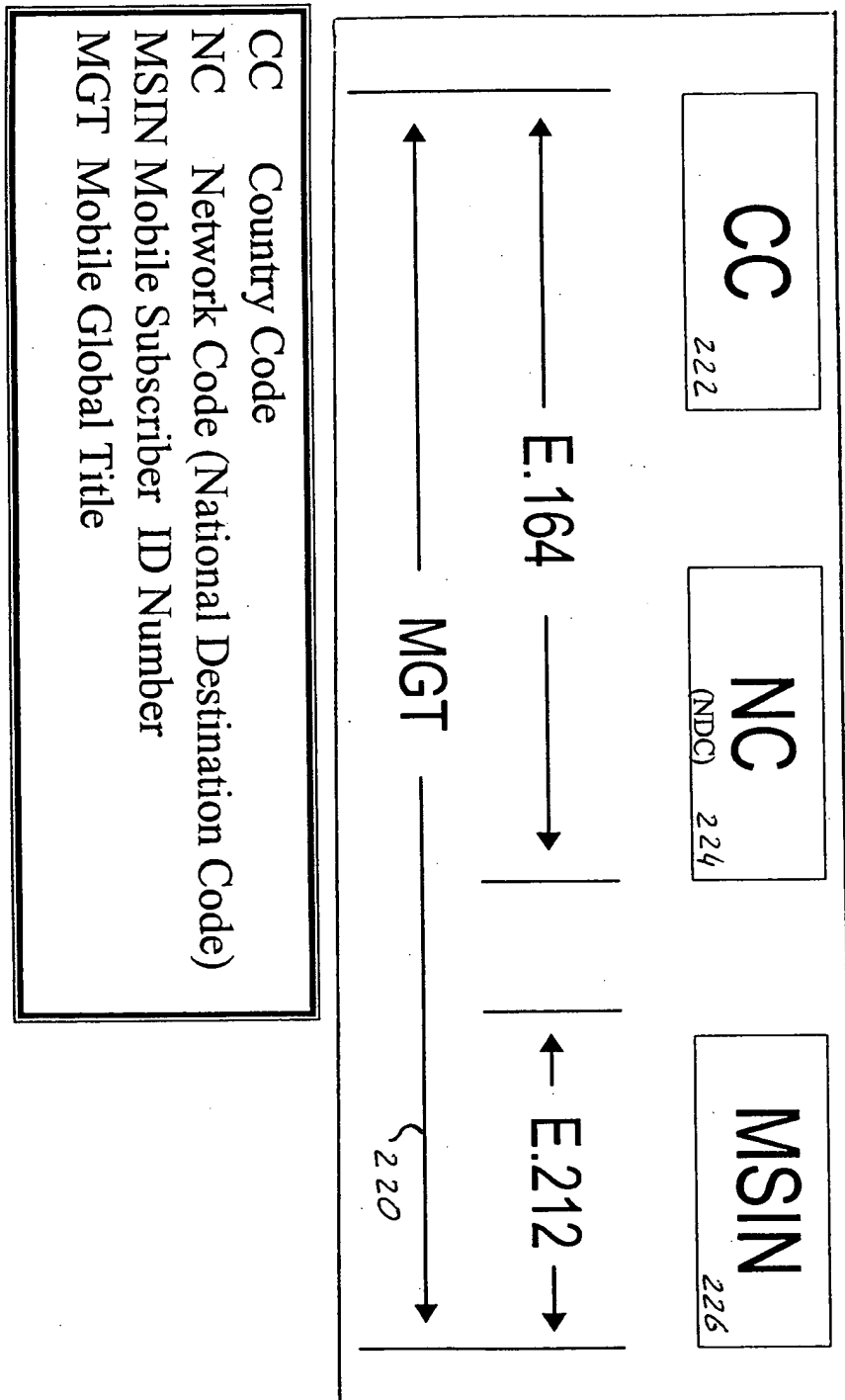


Fig 5b MGT

E.164 Number Format

CC
222

NDC
224

SN
228

CC	Country Code
NDC	National Destination Code (can be Area Code)
SN	Subscriber Number

Fig 5c ISDN Numbering Plan

Fig. 6. Converter Database

Ref	Incoming number Plan Format	screening digits (key)	Outgoing number plan	Outgoing digits, replace incoming	Odd/ Even Indic ator	Outgoing routing type	NOA outgoing called party	NOA outgoing calling party	Primary DPC	Secondary DPC	name of carrier
1	E214	191790	E212	310160		GTT	Natl	Natl	211-255-255	211-255-250	GSM 1
2	E164	44385	E164	44385	O	GTT	Intl	Intl	2-69-1	2-70-1	GSM 2
3	E212	216552	E214	39401		X	X	X	216552		ES-mille

Fig. 7 Global Title Translation and Point Code Generation

Translation Type	0	0
Numbering Plan	0111 (E.214)	0001 (E.164)
Encoding Scheme	BCD Odd/Even	BCD Odd/Even
Nature Of Address Indicator	International	International
Address Information	GT Address Value	GT Address Value

Fig. 8 ITU Global Title Type Encoding

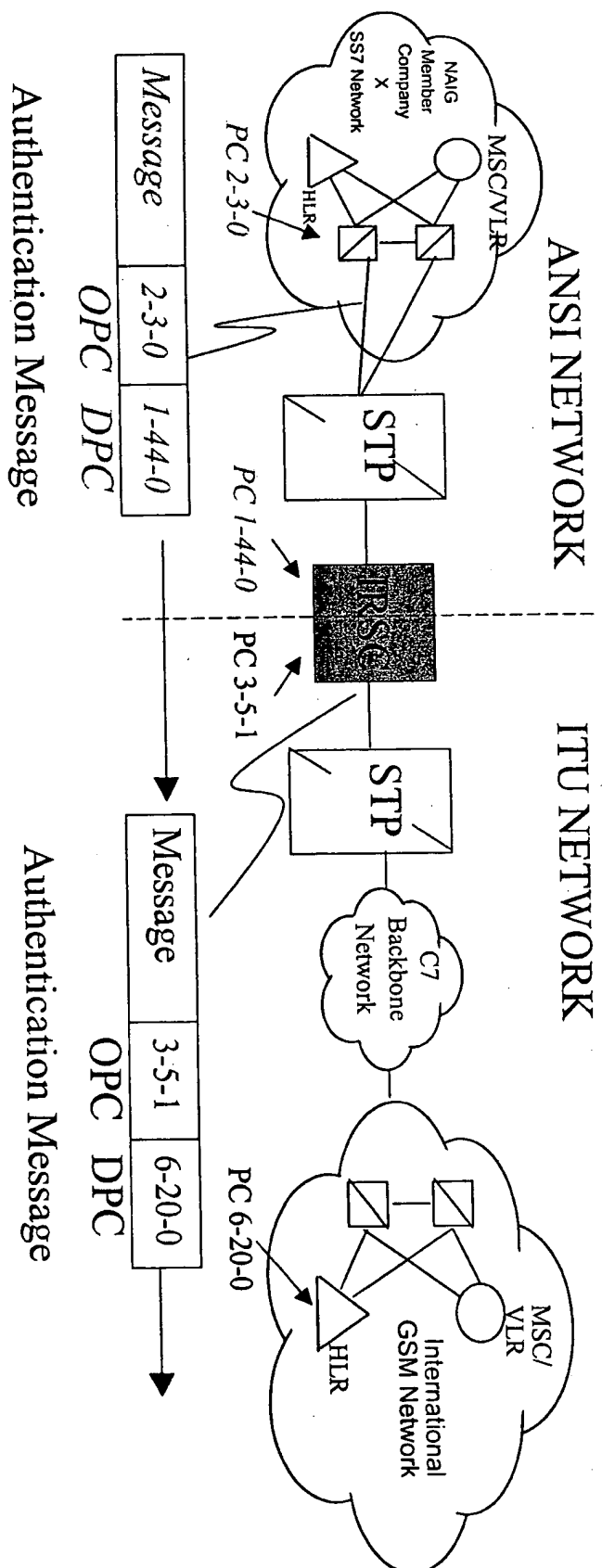
Translation Type	9 (E.212)	10 (E.164)
Address Information	GT Address Value (BCD) **	GT Address Value (BCD) **

**** Note that there is no Odd/Even indicator**

Fig. 9 ANSI Global Title Encoding

Originating Network	Terminating Network	Screen Result	Primary Point code	Secondary Point Code

Fig. 10 Screening Table



NOTES

OPC Originating Point Code (ITU)
 OPC Originating Point Code (ANSI)
 DPC Destination Point Code (ITU)
 DPC Destination Point Code (ANSI)
 All Roaming messages to IRSC use the same, unique Virtual Point Code

Fig. 11 Routing Example